Amendment to the Specification

Please delete the Brief Description of the Drawings paragraphs beginning at page 4, line 25 and ending at page 4, line 32.

Please replace the paragraph beginning with "In the above ..." at page 6, line 19, with the following:

-- In the above formulas (1) to (8), each of a and b represents an integer in the range of 3 to 8, and M represents a hydrogen or an alkali metal element. X represents a hydrogen atom, an alkyl group having 1 to 10 carbon atoms, an aryl group, a acyclic or cyclic amine compound consisting of 1 to 6 nitrogen atoms, 1 to 20 carbon atoms, and a plurality of hydrogen atoms, or a heterocyclic compound consisting of 1 to 2 sulfur atoms, 1 to 6 nitrogen atoms, 1 to 20 carbon atoms, and a plurality of hydrogen atoms. --

A1

Please replace the paragraph beginning with "Ceramics to be uses ..." at page 16, line 18, with the following:

-- Ceramics to be ~~uses~~ used as raw materials of the substrate include oxide ceramics such as almina (Al_2O_3), steatite ($MgO \cdot SiO_2$), forsterite ($2MgO \cdot SiO_2$), mullite ($3Al_2O_3 \cdot 2SiO_2$), magnesium oxide (MgO), spinel ($MgO \cdot Al_2O_3$), and beryllia (BeO); non-oxide ceramics such as aluminum nitride and silicon carbide; low temperature baking ceramics such as glass ceramics; and so on, but not limited to. --

A2

Please replace the paragraphs beginning at page 18, line 3 and ending at page 18, line 28, with the following:

-- In the plating process of the present invention, it is preferred to increase the concentration of dissolved oxygen in the plating solution by passing air or oxygen through the plating solution. Without wishing to be bound by theory, it is believed that the dissolved oxygen

A3

in the plating solution serves as an oxidizing agent to decrease the amount of the compound with the –X-S⁻ structure in the plating solution. One preferred way to increase the concentration of the dissolved oxygen in the plating solution is to pass ~~babbles~~ bubbles of air or oxygen through the plating solution. This may be done by stirring the plating solution or by other bubbling techniques that do not involve stirring. This bubbling process to increase the concentration of dissolved oxygen in the plating solution may be preformed during the electro plating process or during an interval of the electro plating process.

A3 Cont'd

The process of electrolytic copper plating in accordance with the present invention, stirring may be performed without any trouble. It is preferable to perform stirring for uniformly supplying copper ions and an additive on the surface of the plating target. As a stirring method, an air stirring or jet flow stirring method may be used. It is preferable to perform the stirring with air in terms of increasing the amount of dissolved oxygen in the plating solution. In addition, if the stirring is performed by means of jet flow, stirring with air may be used together. Furthermore, a replacing or circulating filtration may be performed. In particular, it is preferable to perform a circulating filtration of the plating solution using a filter to make the temperature of the plating ~~the plating~~ solution uniform. In addition, debris, precipitate, or the like can be removed from the plating solution by such a filtration. --

Please replace the paragraph beginning with "Referring to Fig. 1, ..." at page 21, line 1, with the following:

A4

-- ~~Referring to Fig. 1, vias plated using different concentrations of MPS are shown in cross-sections. As can be seen, the covering power became low as the amount of MPS was increased.~~ The via-filling property became low as the amount of MPS was increased and with the MPS concentration of 25μg/L or higher, the via-filling property became insufficient. --

Please replace the paragraph beginning with "Referring to Fig. 2, ..." at page 21, line 14 and ending at page 18, line 28, with the following:

A5

-- ~~Referring to Fig. 2, vias plated using different concentrations of MPS are shown in cross-sections. As can be seen,~~ Example 3, to which formaldehyde had been added, exhibited a

substantially perfect via-filling property at both MPS concentrations of 50μg/L and 100μg/L, though the via-filling property at 100μg/L was slightly lower than that at 50μg/L. In comparison, as described above, the via-filling property was insufficient at the MPS concentrations of 50μg/L and 100μg/L in Example 2, which was formaldehyde-free. These results suggest that formaldehyde has an ability to compensate for the reduction in the via-filling property of the electrolytic copper plating solution, which is imparted by MPS. Accordingly, it has been proven that the electrolytic copper plating solution can be controlled through addition of formaldehyde. -

A5 Cont'd